

Commentary

A Symposium Emphasizing Animal Behavior Held at Georgetown University, Fall, 1983

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Animal behavior, the scientific study of animal activities, strives to understand both the proximate (physiological) and ultimate (evolutionary) reasons why animals show their particular activities. It is a highly complex science that can be considered to include American Behaviorism, behavioral ecology, "behavioral evolution," behavior genetics, ethology (European Traditionalism), sociobiology, and humanology. It draws from concepts of all other sciences, especially ecology, evolution, and neurobiology. Further, animal behavior uses a diverse array of techniques including chemical, computer, mathematical, photographic, and statistical ones. Due to the wealth of behavioral information, much of it recently generated, it is unlikely that any one person could now fully understand the entire field.

The principal subdisciplines of animal behavior and their temporal occurrences are shown in Figure 1. All areas, except behavioral evolution, the investigation of animal behavior from an evolutionary perspective, essentially arose in the 20th century. Behavioral evolution, the oldest serious branch of behavior, germinated in the 19th century soon after the publication of

Charles Robert Darwin's (1859) monumental book *On The Origin of Species by Means of Natural Selection or The Preservation of Favoured Races in The Struggle for Life*.

In celebration of the current burgeoning of animal behavior and the awarding of the 1973 Nobel Prize for Physiology or Medicine to Konrad Lorenz, Karl von Frisch, and Niko Tinbergen, for their studies of animal behavior, a symposium emphasizing animal behavior was held at Georgetown University in fall, 1983. One seminar was given during each of six successive weeks. In chronological order of presentation, the speakers and their seminar titles were:

Daniel J. Sullivan, S. J., Parasitic Microwasps of Aphids

Jeffrey R. Aldrich, What Makes a Bug Behave? Perfumes and Prophylactics

Richard M. Duffield, Behavioral and Chemical Studies on Bee and Wasp Exocrine Glands

George Middendorf III, Social Organization in Yarrow's Lizards

Luther P. Brown, Maintenance of Horn Size Variation and Its Consequences in

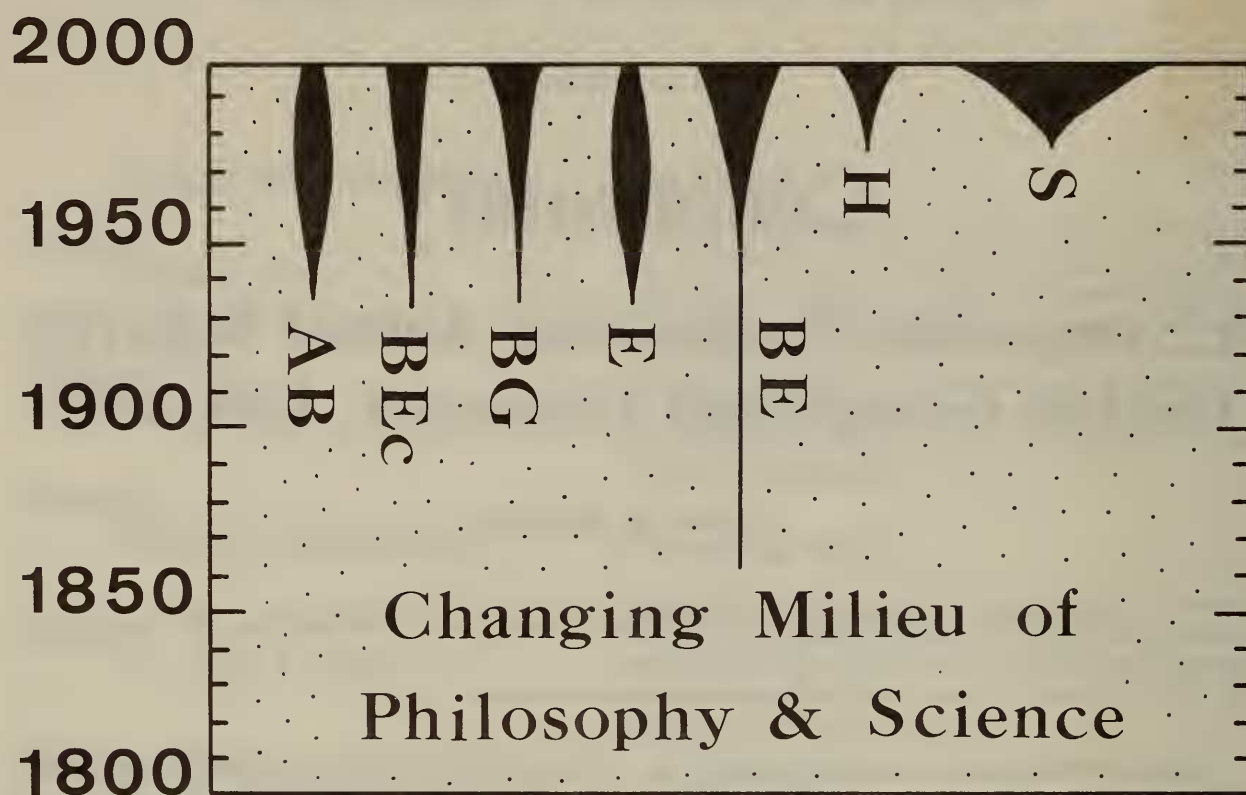


Fig. 1. Amounts of activity in subbranches of animal behavior. In any particular year, the width of a subdiscipline suggests the relative amount of activity that occurred or will occur in it, based on^{1, 2, 3}. AB, American Behaviorism; BE, "behavioral evolution;" BEc, behavioral ecology; BG, behavior genetics; E, ethology; H, humanology; S, sociobiology.

Fungus Beetles *Bolitotherus cornutus*
(Tenebrionidae)

Devra G. Kleiman, Behavioral Characteristics Associated with a Monogamous Mating System in the Golden Lion Tamarin, *A New World Primate*

Four of these speakers have contributed the following papers to this symposium series.

Acknowledgements

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couraging this symposium, the speakers, and many others who helped it to come into fruition. Professors Irving Gray and Joseph H. Neale kindly extended an invitation from the Journal of the Washington Academy of Sciences to publish this series of papers.

References Cited

1. Drickamer, L. C. and S. H. Vessey. 1982. *Animal Behavior*. Willard Grant Press, Boston, Massachusetts. 510 pp.
2. Mayr, E. 1982. *The Growth of Biological Thought*. Harvard University Press, Cambridge, Massachusetts. 974 pp.
3. Wilson, E. O. 1975. *Sociobiology*. Harvard University Press, Cambridge, Massachusetts. 697 pp.